

## ABSTRACT OF THE DISCLOSURE

An article irradiation system is arranged into an upper level and a lower level. The upper level houses a radiation source used to generate beams of radiation for irradiating articles. The radiation source can emit multiple beams of radiation, for irradiating articles on the upper and the lower levels. The upper level has an upper level shield, arranged as an inner shield and an outer shield, for attenuating radiation generated by the radiation source. The lower level can be disposed below ground level, and a portion of the lower level is covered by the upper level shield, which reduces the shielding requirements for a ceiling of the lower level.

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